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Formal solutions of inverse problem of gravimetry for the spherical data using

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Abstract

In this paper we present a method for interpretation of gravimetric data obtained on spherical surface based on wavelet transform with the so-called "native" wavelet basis. We show that this approach has several distinct advantages over commonly used methods, including a simple way of obtaining formal solutions of the inverse problem and easy identification of the causative sources. The most important result is the technique for determining location and magnitude of the sources of the gravitational fields in its wavelet domain for the two-and three-dimensional cases. We demonstrate The results of the application of wavelet transformation techniques for solving some applied problems for a plane and a sphere.